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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,895	12/28/2004	Katsumi Okayama	075834.00429	2568

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EXAMINER

WENDLER, ERIC J

ART UNIT	PAPER NUMBER
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2824

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/519,895

Applicant(s)

OKAYAMA ET AL.

Examiner

Eric Wendler

Art Unit

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-8 is/are rejected. -
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/28/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Search History.

### **DETAILED ACTION**

1. This action is responsive to the following communications: the Application and the Information Disclosure Statement filed on December 28, 2004.
2. Claims 1, 3-8 are pending in the case. Claims 1 and 8 are independent claims.

#### ***Priority***

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. JP 2002-202026, filed on July 11, 2002.

#### ***Information Disclosure Statement***

4. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1, 4, 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by the US Patent Application Publication to Miyauchi et al (2001/0021089).**

7. **Regarding claim 1**, Miyauchi teaches, in Fig. 1, a magnetic non-volatile memory device (100) provided with a magnetic shielding layer (102a-b) made from a soft magnetic metal for suppressing penetration of magnetic flux into device, formed on both the surface at and opposite the mounting side of the device.

8. **Regarding claim 4 and 7**, Miyauchi further teaches that the magnetic device is comprised of magnetic shield layers, bias layers, and a magnetic thin film device having a composing element which is common from one selected from the group consisting of Fe, Co, Pt, Mn, and Al. The magnetic shield layers are made of electrically conductive soft magnetic material, which include Permalloy and other compounds including Co and Fe. The bias layers are made of a hard magnetic metal that are oxidized and certain compounds containing Co and Fe. Other various layers of the magnetic thin film also could be made of compounds including Co and Fe (paragraphs 0058-0062, 0074, 0078).

9. **Regarding claim 8**, Miyauchi teaches all the claimed elements as discussed above, including that the various layers of the magnetic memory device are formed by sputtering techniques (paragraphs 0129, 0130, 0132, 0137, 0138, 0140), which implies that these layers could be formed in a single sputtering chamber.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the US Patent Application Publication to Miyauchi et al (2001/0021089) in view of the US Patent to Yoshikawa (6648990).**

**12. Regarding claim 3,** Miyauchi teaches all the claimed elements as discussed above but fails to teach that the magnetic shield layers are formed of a nano-granular structure having a magnetic layer and a non-magnetic layer. Yoshikawa teaches the use of nano-granular structures as being excellent in soft magnetic properties and for use in high frequency magnetic applications (column 1, lines 18-57). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use the nano-granular materials taught by Yoshikawa in structures that require soft magnetic materials, such as the magnetic shielding layers taught by Miyachi.

**13. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the US Patent Application Publication to Miyauchi et al (2001/0021089) in view of the US Patent to Shouji et al (5,880,910).**

**14. Regarding claim 5,** Miyauchi teaches all the claimed elements as discussed above but fails to teach a passivation film formed on the magnetic shield layer. Shouji teaches the use of a passivation film coated on top of a composite magnetic head device (column 14, lines 14-15). Passivation layers are well known in the art as a way of protecting the surfaces of metal and mineral layers. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use the passivation layer taught by Shouji to coat the magnetic shield layer taught by Miyauchi for the purpose of protecting the magnetic shield layer.

**15. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the US Patent Application Publication to Miyauchi et al (2001/0021089) in view of the US Patent to Saito et al (6,717,845).**

**16. Regarding claim 6,** Miyauchi teaches all the claimed elements as discussed above, but fails to explicitly teach that the magnetic shielding layers are magnetically coupled to each other. Saito teaches a layer of metal-nonmetal nano-granular material covering write-in elements for the purpose of controlling and guiding the magnetic field produced (column 5, lines 43-63; column 6, lines 33-37). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine the teaching of Saito with the teaching of Miyauchi since the covering layer taught by Saito is comprised of the same metallic-nonmetallic nano-granular material as the magnetic shielding devices taught above by the combination of Miyauchi and Yokishawa, and would be ideal for magnetically coupling the two magnetic shielding devices together for the purpose of continued suppression of magnetic flux.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Wendler whose telephone number is (571) 272-5063. The examiner can normally be reached on Monday - Friday 8AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EJW  
12/20/05



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